

means operative when said main frame is in said first position for separating said main frame and a subframe received therein from a disk received therein, whereby said disk may be read by said disk reader.

6. The disk storage and playback device of claim 5, wherein said separating means comprises means for supporting said disk in said disk-reading position and means for displacing said main frame and said subframe received therein to a position nonobstructive to said disk reader.

7. A disk storage and playback device comprising:
a chassis;
an n quantity of subframes, each of said subframes being adapted to receive a single disk;
a magazine, nondetachable, carried by said chassis, said magazine being adapted to receive n quantity of said subframes;

n-1 of said subframes being received in said magazine when one of [a] subframes is received in said mainframe;

a disk reader adapted to read one of said disks when said disk is in a disk-reading position;

said mainframe being adapted to receive a single one of said subframes, said mainframe being movably carried by said chassis for movement between a first position, whereat a disk carried therein is in said disk reading position, and a second position whereat access is provided to a subframe received therein such that a disk may be inserted therein;

and disk conveying means for transporting a selected one of said subframes from said magazine to said main frame when said main frame is in said first position.

8. A disk storage and playback device comprising:
a chassis;
a magazine nondetachably carried by said chassis;
said magazine including a plurality of disk storage locations therein;
a disk reader;

means for displacing said magazine to align a desired one of said disk storage locations at a desired level;
first disk transport means for moving a disk in said desired one of said disk storage locations in a substantially straight line from said magazine to said disk reader;

said first disk transport means being further effective for moving said disk from said disk reader back to its respective disk storage location;

second disk transport means for moving a disk in a substantially straight line from outside said disk storage and playback device to said disk reader; and

means, effective without requiring reading of said disk, for moving said disk from said second disk transport means to said first disk transport means, whereby said first disk transport means is enabled to deposit said disk, originating outside said device, in an empty one of said disk storage locations, thereby permitting stocking said magazine with disks.

9. Apparatus according to claim 8, further comprising:

means effective without requiring reading of said disk, for moving said disk from said first transport means to said second transport means; and

means for permitting said second transport means to move said disk to a location outside the device, whereby disks stocked in said magazine may be removed from the device.

a mainframe;

said

1 10. A device for storing and playing disks comprising:
2 a chassis;
3 a disk reader accepting disks situated at a read position;
4 storage means for storing a plurality of said disks;
5 said storage means being nondetachably carried in said chassis;
6 said storage means including a plurality of storage positions, each for
7 accepting a single one of said disks, arranged in a concentric stack;
8 transport means for transporting said disks between an access
9 position, said storage means, and said read position;
10 said transport means transporting said disks along a single
11 substantially planar path parallel to a plane of a surface of said disks and
12 fixed relative to said chassis;
13 means for aligning a selectable one of said storage positions with
14 said single substantially planar path of said transport means; and
15 said access position permitting external access for loading and
16 unloading a single one of said disks, to and from, respectively, said storage
17 means.

1 11. A device for storing and playing disks comprising:
2 a chassis;
3 a disk reader accepting disks situated at a read position;
4 storage means for storing a plurality of said disks;
5 said storage means including a plurality of storage positions, each for
6 accepting a single one of said disks, arranged in a concentric stack;
7 transport means for transporting said disks between an access
8 position, said storage means, and said read position;
9 said transport means transporting said disks along a single
10 substantially planar path parallel to a plane of a surface of said disks and
11 fixed relative to said chassis;

12 means for aligning a selectable one of said storage positions with
13 said single substantially planar path of said transport means;
14 said single substantially planar path being orthogonal to a direction
15 of alignment of said storage means; and
16 said access position permitting external access for loading and
17 unloading a single one of said disks, to and from, respectively, said
18 transport means.

1 12. A device for storing and playing disks comprising:
2 a chassis;
3 a disk reader accepting disks situated at a read position;
4 storage means for storing a plurality of said disks;
5 said storage means being nondetachably carried in said chassis;
6 said storage means including a plurality of concentric storage
7 positions, each for accepting a single one of said disks;
8 transport means for transporting said disks between said storage
9 means and said read position;
10 said transport means transporting said disks in a single plane fixed
11 relative to said chassis and parallel to a surface of said disks transported;
12 means for aligning a selectable one of said storage positions with
13 said single plane of said transport means;
14 said chassis defining an access aperture aligned with said single
15 plane and permitting external access for loading and unloading a single one
16 of said disks to and from said selected one of said storage positions in said
17 storage means; and
18 ejection means for ejecting one of said disks, contained within said
19 selected one of said storage locations, through said access aperture.

1 13. A device for storing and playing disks comprising:
2 a chassis;

3 a disk reader accepting disks situated at a read position;
4 storage means for storing a plurality of said disks;
5 said storage means being nondetachably carried in said chassis;
6 said storage means including a plurality of concentric storage
7 positions, each for accepting a single one of said disks;
8 transport means for transporting said disks between said storage
9 means and said read position;
10 said transport means transporting said disks in a single plane parallel
11 to a surface of said disks transported and fixed relative to said chassis;
12 means for aligning a selectable one of said storage positions with
13 said single plane of said transport means;
14 said chassis defining an access aperture permitting external access
15 for loading and unloading a single one of said disks, to and from said read
16 position; and
17 ejection means for ejecting said single one of said disks from said
18 read position to said access aperture for purposes of unloading.

1 14. A device for storing and playing disks comprising:
2 a chassis;
3 a disk reader accepting disks situated at a read position;
4 storage means for storing a plurality of said disks;
5 said storage means being nondetachably carried in said chassis;
6 said storage means including a plurality of concentric storage
7 positions, each for accepting a single one of said disks;
8 transport means for transporting said disks between said storage
9 means and said read position;
10 said transport means transporting said disks in a single plane parallel
11 to a surface of said disks transported and fixed relative to said chassis;
12 means for aligning a selectable one of said storage positions with
13 said single plane of said transport means;

said chassis defining an access aperture, aligned with said single plane, permitting external access for loading and unloading a single one of said disks, to and from, said selected one of said storage positions in said storage means while said storage means remains unexposed and within the storage and playback device;

ejection means for ejecting said single one of said disks contained within said selected one of said storage locations to an exposed position at said access aperture; and

said ejection means functioning in said single plane of said transport means.

15. A device for storing and playing disks comprising:

a chassis;

a disk reader accepting disks situated at a read position;

storage means for storing a plurality of said disks;

said storage means being nondetachably carried in said chassis;

said storage means including a plurality of concentric storage positions, each for accepting a single one of said disks;

a chassis defining an access aperture permitting external access for loading and unloading one of said disks, to and from, said storage and playback device;

said access aperture, said read position, and a selected one of said storage positions defining a single plane fixed relative to said chassis;

means for aligning said selected one of said storage positions with said single plane; and

transport means for transporting said disks substantially within said single plane and within said storage and playback device such that said disks may be stored, read, unloaded, and loaded through said access aperture to and from a position extending outside said chassis.

1 16. A device for storing and playing disks comprising:
2 a chassis;
3 a disk reader accepting disks situated at a read position;
4 storage means for storing a plurality of said disks;
5 said storage means being nondetachably carried in said chassis
6 said storage means including a plurality of storage positions each for
7 accepting a single one of said disks;
8 transport means for transporting one of said disks between an access
9 position, said selectable one of said storage positions, and said read
10 position;
11 said transport means transporting said one of said disks along a first
12 substantially linear path between said access position and said storage
13 means;
14 said transport means transporting said one of said disks along a
15 second substantially linear path between said access position and said read
16 position;
17 said first and second substantially linear paths being within a single
18 transport plane fixed relative to said chassis;
19 means for aligning a selectable one of said storage positions with
20 said single transport plane; and
21 said access position permitting external access for inserting and
22 removing a single one of said disks, to and from, respectively, said transport
23 means.

1 17. A device for storing and playing disks comprising:
2 a chassis;
3 a disk reader accepting disks situated at a read position;
4 storage means for storing a plurality of said disks;
5 said storage means being nondetachably carried in said chassis;

6 said storage means including a plurality of storage positions each for
7 accepting a single one of said disks;

8 transport means for transporting one of said disks between an access
9 position, said selectable one of said storage positions, and said read
10 position;

11 said transport means transporting said one of said disks along a first
12 substantially linear path between said access position and said storage
13 means;

14 said transport means transporting said one of said disks along a
15 second substantially linear path between said storage means and said read
16 position;

17 said first and second substantially linear paths being within a single
18 transport plane fixed relative to said chassis;

19 means for aligning a selectable one of said storage positions with
20 said single transport plane; and

21 said access position permitting external access for inserting and
22 removing a single one of said disks, to and from, respectively, said transport
23 means.

1 18. A device for storing and playing disks comprising:

2 a chassis;

3 a disk reader accepting a disk situated at a read position;

4 storage means for storing a plurality of said disks;

5 said storage means being nondetachably carried in said chassis;

6 said storage means including a plurality of storage positions each for
7 accepting a single one of said disks;

8 transport means for transporting one of said disks between an access
9 position, said selectable one of said storage positions, and said read
10 position;

said transport means transporting said one of said disks along a first substantially linear path between said access position and said read position;

said transport means transporting said one of said disks along a second substantially linear path between said storage means and said read position;

said first and second substantially linear paths being within a transport plane fixed relative to said chassis;

means for aligning a selectable one of said storage positions with said transport plane; and

said access position permitting external access for inserting and removing a single one of said disks, to and from, respectively, said transport means.

19. A device for storing and playing disks comprising:

a chassis;

a disk reader accepting a disk situated at a read position;

storage means for storing a plurality of said disks;

said storage means being nondetachably carried in said chassis;

said storage means including a plurality of storage positions each for accepting a single one of said disks;

transport means for transporting one of said disks;

means for aligning a selectable one of said storage positions with said transport means;

said transport means transporting said one of said disks between an access position, said selectable one of said storage positions, and said read position;

said transport means transporting said disks along a substantially linear path in a single plane parallel to a surface of said disks and fixed relative to said chassis;

17 said transport means being fixed, relative to said chassis, in a
18 direction orthogonal to said single plane; and
19 said access position permitting external access for inserting and
20 removing said disks, to and from, respectively, said storage means.

1 20. A device for storing and playing disks comprising:
2 a chassis;
3 a mainframe for carrying disks;
4 a magazine, non-detachably carried in said chassis, having a plurality
5 of means for holding disks in a concentric array;
6 a disk reader including means for reading disks at a first position in
7 alignment with said disk reader;
8 first disk transport means for transporting disks between said
9 magazine and said mainframe at said first position along a first straight line
10 path;
11 second disk transport means for transporting said mainframe along
12 a second straight line path between said first position and an access
13 position whereat disks are loaded and unloaded to and from said device;
14 means for selectively aligning said first disk transport means and said
15 magazine for transporting a selected disk to and from said magazine; and
16 means for controlling said first and second transport means to
17 enable loading and unloading of said magazine via said access position
18 without said disk reader reading said disk.

1 21. A device for storing and playing disks comprising:
2 a chassis;
3 a magazine, non-detachably carried in said chassis, having a plurality
4 of means for holding disks in a concentric array;
5 a disk reader for reading disks at a first position in alignment with
6 said disk reader;

7 a mainframe for accepting one of said disks;
8 first disk transport means for transporting a selected disk between
9 said magazine and said mainframe at said first position along a first straight
10 line path in a plane of said disk;
11 second disk transport means for transporting said mainframe
12 between said first position and an access position, whereat disks are loaded
13 and unloaded to and from said device, along a second straight line path;
14 means for selectively aligning said first disk transport means and said
15 magazine for transporting a selected disk to and from said magazine;
16 means for displacing said selected disk from said first position to a
17 reader engaged position at said disk reader for reading; and
18 means for controlling said first and second transport means to
19 enable loading and unloading of said magazine via said access position
20 without said disk reader reading said disk.

1 22. A device for storing and playing disks comprising:
2 a chassis;
3 subframes for carrying disks;
4 a magazine, non-detachably carried in said chassis, having a plurality
5 of means for holding said subframes in a concentric array;
6 a disk reader having a turntable for reading disks at a first position
7 in alignment with said disk reader;
8 a mainframe for accepting one of said subframes;
9 first disk transport means for transporting a selected disk in one of
10 said subframes between said magazine and said mainframe at said first
11 position;
12 second disk transport means for transporting said mainframe
13 between said first position and an access position whereat disks are loaded
14 and unloaded to and from said device;

15 means for displacing said selected disk from said first position to
16 said turntable of said disk reader; and
17 means for controlling said first and second transport means to
18 enable loading and unloading of said magazine via said access position
19 without said disk reader reading said disk.

1 23. A device for storing and playing disks comprising:
2 a chassis;
3 subframes for carrying disks;
4 a magazine, non-detachably carried in said chassis, having a plurality
5 of means for holding said subframes in a concentric array;
6 a disk reader having a turntable for reading disks at a first position
7 in alignment with said disk reader;
8 first disk transport means for transporting a selected disk on one of
9 said subframes between said magazine and said first position;
10 second disk transport means for transporting said selected disk
11 between said first position and an access position whereat disks are loaded
12 and unloaded to and from said device;
13 means for selectively aligning said first disk transport means and said
14 magazine for transporting said selected disk to and from said magazine;
15 means for displacing said selected disk from said first position to
16 said turntable of said disk reader; and
17 means for controlling said first and second transport means to
18 enable loading and unloading of said magazine via said access position
19 without said disk reader reading said disk.

1 24. A device for storing and playing disks comprising:
2 a chassis;
3 a magazine non-detachably carried in a non-exposed position within
4 said chassis;

5 said magazine having a plurality of means for holding said disks in
6 a concentric array;

7 a disk reader including a turntable and a means for reading disks at
8 a first position in alignment with said turntable;

9 first disk transport means for transporting a selected disk of said said
10 disks between said magazine and said first position;

11 second disk transport means for transporting said selected disk
12 between said first position and an access position whereat disks are loaded
13 and unloaded to and from said device;

14 means for selectively aligning said first disk transport means and said
15 magazine for transporting said selected disk to and from said magazine;
16 and

17 means for controlling said first and second transport means to
18 enable loading and unloading of said magazine via said access position
19 without said disk reader reading said disk.

1 25. A device for storing and playing disks comprising:

2 a chassis;

3 subframes for carrying disks;

4 a magazine, non-detachably carried in said chassis, having means for
5 holding said subframes in a concentric array;

6 a disk reader;

7 means for transporting a selected one of said subframes between
8 said magazine and an access position whereat a disk is loaded and unload
9 to and from said selected one of said subframes; and

10 means for controlling said means for transporting to enable loading
11 and unloading of said magazine via said assess position without said disk
12 reader reading said disk.

1 26. A device for storing and playing disks comprising:
2 a chassis;
3 subframes for carrying disks;
4 a magazine, non-detachably carried in said chassis;
5 means for holding said subframes in a concentric array in said
6 magazine;
7 a disk reader;
8 a mainframe for accepting one of said subframes;
9 subframe transport means for transporting a selected one of said
10 subframes between said magazine and said mainframe;
11 mainframe transport means for transporting said mainframe between
12 an accept position whereat said selected one of said subframes is accepted
13 and an access position whereat said disk is loaded and unloaded to and
14 from said selected one of said subframes; and
15 means for controlling said means for transporting to enable loading
16 and unloading of said magazine via said access position without said disk
17 reader reading said disk.

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